



# THE PHARMACY CORNER

VOLUME 1, ISSUE 1

NOVEMBER 2009

## INSIDE THIS ISSUE

**Medication Reconciliation: Compliance Increases Patient Safety and Reduce Medication Errors**

**Pharmacy Staff**

**What is 2009 H1N1 (Swine) Flu?**

**Formulary Restrictions**

- Singulair
- Chantix

**Clinical Update: PPIs and Plavix (Clopidogrel)**

## Pharmacy Services

*Main Pharmacy  
Ext 4210*

*Secretary - 2935*

*Out Patient - 3330*

*Mail Order - 2935*

*In Patient - 2572*

*Pyxis - 2379*

*Supervisor - 3353*

*Chief - 2567*

## Medication Reconciliation

Medical Reconciliation is a standardized process of comparing a patient's medication orders to all of the medications that the patient has been taking. Medical Reconciliation is a JCAHO requirement and done to avoid medication errors such as omissions, duplications, dosing errors, or drug interactions. It should be done at every transition of care in which new medications are ordered or existing orders are rewritten. Transitions in care include changes in setting, service, practitioner or level of care.

This process comprises five steps: 1) develop list of current medications; 2) develop a list of medications to be prescribed; 3) compare the medications on the two lists; 4) make clinical decisions based on the comparison; and 5) communicate the new list to appropriate caregivers and to the patient.

**“Medical errors are the eighth leading cause of death for Americans — more than motor vehicle accidents, breast cancer or AIDS.”**

Patients must be taught about the importance of an accurate and updated medication list, including nonprescription medications and herbal supplements, as well as the necessity to bring medication bottles or the most current medication list to every provider visit or hospital admission. Such education would significantly enhance the efficiency and accuracy of medication reconciliation. A Pharmacist advise is available at each step in this process.

*-submitted by  
Sharail Smith, PharmD*

## PHARMACY STAFF... here to serve



*Pictured from left to right:*

*Robin Townsend, Antoinet Moore, Duane Ashe, Haley Rogers, Janet Ramos, Kellie Brown, Samuel Henley, Cylina Austin, Regina Coley, Epifanio Ramos-Cortes, Priscilla Fambrough*

*Pictured from left to right:*

*Joyce Osborne, Stephanie Mimbs, Nelson Mainor, JoBett Veal, Lawrence Loque, Sharail Smith, Laura Miller, Cynthia Douglas, Glenn Hobbs*

*Not pictured: Alison James, Carla Youngblood, Betty Lowe, Sarah Murphy-Veal, Brenda Malone, Garry Kelley, Michael Stafford, Angela Crew-Dothard, Deborah Hobbs, Terri Moorman, and Mary Crabb*

# What is 2009 H1N1 (Swine Flu)?



*Note: Much of the information in this document is based on studies and past experience with seasonal (human) influenza. CDC believes the information applies to 2009 H1N1 (swine) viruses as well, but studies on this virus are ongoing to learn more about its characteristics.*



## Why is 2009 H1N1 virus sometimes called “swine flu”?

This virus was originally referred to as “swine flu” because laboratory testing showed that many of the genes in this new virus were very similar to influenza viruses that normally occur in pigs (swine). But further study has shown the H1N1 virus is very different from what normally circulates in North American pigs.

## How does 2009 H1N1 virus spread?

Spread of 2009 H1N1 virus is thought to occur in the same way that seasonal flu spreads. Flu viruses are spread mainly from person to person through coughing or sneezing by people with influenza. Sometimes people may become infected by touching something – such as a surface or object – with flu viruses on it and then touching their mouth or nose.

## What are the signs and symptoms of this virus in people?

The symptoms of 2009 H1N1 flu virus in people include fever, cough, sore throat, runny or stuffy nose, body aches, headache, chills and fatigue. Some people may have vomiting and diarrhea. People may be infected with the flu, including 2009 H1N1 and have respiratory symptoms without a fever.

## Take these everyday steps to protect your health:

- Cover your nose and mouth with a tissue when you cough or sneeze.
- Wash your hands often with soap and water. If soap and water are not available and alcohol-based products are not allowed, other hand sanitizers that do not contain alcohol may be useful.
- Avoid touching your eyes, nose or mouth. Germs spread this way.
- Try to avoid close contact with sick people. If you are sick with flu-like illness, stay home for at least 24 hours after your fever is gone except for medical care/necessities.

## If I have a family member at home who is sick with 2009 H1N1 flu, should I go to work?

Employees who are well but who have an ill family member at home with 2009 H1N1 flu can go to work as usual. These employees should monitor their health every day, and take everyday precautions including washing their hands often with soap and water, especially after they cough or sneeze. If they become ill, they should notify their supervisor and stay home. For more information please see General Business and Workplace Guidance for the Prevention of Novel Influenza A (H1N1) Flu in Workers.

## Are there medicines to treat 2009 H1N1 infection?

Yes, based upon the CDC recommendations for antiviral treatment, the VA recommends Oseltamivir (Tamiflu) or Zanamivir (Relenza). Confirmed, probable or suspected 2009 H1N1 or seasonal influenza treatment is recommended in persons who are hospitalized and who are severely ill or who are showing evidence of rapid clinical deterioration. Treatment should also be considered in patients who are at higher risk for influenza-related complications. High-risk for complications are defined as adults 65 years of age and older, persons with chronic pulmonary, cardiovascular (except hypertension), renal, hepatic, hematological (including sickle cell disease), or metabolic disorders (including diabetes mellitus), disorders that can compromise respiratory function or the handling of respiratory secretions or that can increase the risk for aspiration, immunosuppression, pregnant women, persons younger than 19 years of age who are receiving long-term aspirin therapy, residents of nursing homes/chronic-care facilities, and children young than 2 years old. Once the decision to administer antiviral treatment is made by the health care provider, treatment should be initiated within 48 hours of illness onset. This year, VA has agreed to vaccinate targeted non-VA, Federal workers who are at risk of 2009 novel H1N1 influenza because of their Federal occupations and whose agencies request vaccination at VHA medical facilities. Targeted populations at occupational risk of 2009 novel H1N1 influenza are currently limited to **health care and emergency medical services personnel who have direct contact with patients or infectious material.**

## Montelukast (Singulair)

Singulair (montelukast) is a medicine in the drug class known as leukotriene receptor antagonists (blockers). Leukotrienes are chemicals the body releases in response to an inflammatory stimulus, such as an inhaled allergen. Singulair is used to treat chronic persistent asthma, exercise induced asthma, and the symptoms of allergic rhinitis (sneezing, stuffy nose, runny nose, itching of the nose). This medication shouldn't be used to stop an asthma attack that has already started. It is used to prevent attacks from occurring.

Singulair (montelukast) is on the VA National Formulary, but is restricted to certain indications. It may be considered in some patients with Persistent Asthma, Exercise Induced Asthma, or Allergic Rhinitis after failure to first line rec-

ommended therapy. It should not be used for the treatment of Chronic Obstructive Pulmonary Disease (COPD) as there is not enough scientific or clinical information to support its use in COPD. At present, there is no evidence for triple therapy use (antihistamine + nasal steroid + leukotriene modifying agents) for Allergic Rhinitis. For most patients, steroid inhalers appear to be a more effective treatment.

On March 27, 2008, the FDA announced that it was reviewing safety data that raised concerns about a possible association between the use of montelukast and behavior/mood changes, suicidality (suicidal thinking and behavior) and suicide. Patients and providers should be aware of the potential for neuropsychiatric events (e.g., suicidal ideation, depression, agitation, aggression, anxiousness,

irritability, restlessness, dream abnormalities and hallucinations, and insomnia) with montelukast. Providers are encouraged to

document that they have discussed the risks vs. benefits with their patients. Providers should also consider discontinuing these medications if patients develop any neuropsychiatric symptoms.

COPD and Asthma are two conditions which affect a large portion of our Veteran population. Your VA pharmacy is committed to promoting safe and effective use of this medication for our Veterans.

-submitted by  
Laura Miller, PharmD



## Chantix (Varenicline)

Chantix (varenicline) is a non-nicotine prescription drug that works by preventing nicotine from attaching to nicotine receptors in the brain. In February of 2008, the FDA issued a Public Health Advisory on varenicline to alert health professionals and patients about new warnings related to changes in behavior, agitation, depressed mood, suicidal ideation, and actual suicidal behavior. These serious adverse effects have occurred in patients with and without pre-existing psychiatric disease, but they are more prevalent in patients with pre-existing psychiatric disease. Varenicline is on the VA National Formulary, but is restricted for patients who have failed other pharmacological agents. The VA

Center for Medication Safety collected and analyzed spontaneous reports of adverse events with Varenicline use. The evaluation of these data was used to formulate the current criteria for use.

Varenicline is not recommended in patients whose monitoring is only via non-VA telephone counseling, based on a prescription written by a non-VA prescriber, history of suicidal, homicidal, or assaultive behavior (within previous 12 weeks), current persistent suicidal/homicidal ideation or an active plan or intent to harm self or others, or with an untreated or unstable mental disorder. Patients **without** an active mental health disorder meet criteria if they have had more than 1 relapse on nicotine replacement therapy and/or bupropion, or have a medical contraindication to these medications OR a medical contraindication to these medications. For Patients **with** a mental health disorder, in addition, if the mental disorder is clinically stable AND the prescriber obtains concurrence for treatment from the patient's mental health provider (if the patient is not under mental health care, a mental health provider should be consulted).

-submitted by  
Lindsey Jackson, PharmD. Candidate  
University of Georgia College of Pharmacy





# Clopidogrel (Plavix) with Use of PPIs (Proton Pump Inhibitors)



Clopidogrel (Plavix) is a prodrug that is metabolized in the liver to the active form that inhibits platelet activation by cytochrome P450 CYP2C19. Proton pump inhibitors (PPIs) are also metabolized by CYP2C19. The matter of which patients should receive a PPI, in light of

the potential interaction, is controversial. There is preliminary evidence to suggest that PPIs may reduce clopidogrel's antiplatelet effect.

The results of the *Clopidogrel Medco Outcomes Study* found that patients taking both clopidogrel and proton pump inhibitors experienced a 50 % increase in the combined risk of hospitalization for heart attack, stroke, unstable angina, or repeat revascularization. Based on this study, it is recommended that health care providers evaluate patients for the continued need for PPI therapy and consider prescribing a histaminergic (H<sub>2</sub>) blocker or antacids instead of PPIs concomitantly with clopidogrel, considering the high risk for adverse events.

Prospective data from the Clopidogrel and the Optimization of Gastrointestinal Events [COGENT] study suggest that adding a PPI to clopidogrel does not increase the risk for cardiac events. Based on this data, experts suggest giving the doses of clopidogrel and PPI at different times of day might be a good idea. It concluded taking the PPI 30 minutes before breakfast and clopidogrel at night might be most convenient for patients.

In conclusion, it does not appear that a single PPI is less likely than others to result in the potential interaction. Omeprazole, esomeprazole, pantoprazole and lansoprazole were each associated with 39-61% greater risk of a CV event vs. clopidogrel alone. The FDA has issued a safety bulletin regarding this issue and is working with manufacturers to design a prospective trial to assess the interaction. The VHA Pharmacy Benefits Management Services and the Medical Advisory Panel recommends that patients who are currently receiving therapy with a PPI and clopidogrel should be evaluated for the continued need for PPI therapy.

#### References:

- VHA Pharmacy Benefits Management Service. *Clopidogrel Criteria for use.*  
<http://vaww.national.cmap.va.gov/PBM/default.aspx>
- *Do Proton Pump Inhibitors Decrease Clopidogrel (Plavix) Activity?* Pharmacist's Letter/Prescriber's Letter 2008;24(11):241114.
- Rx List The Internet Drug Index ([www.rxlist.com/plavix-drug.htm](http://www.rxlist.com/plavix-drug.htm) )
- SCAI Statement on "A National Study of the Effect of Individual Proton Pump Inhibitors on Cardiovascular Outcomes in Patients Treated with Clopidogrel Following Coronary Stenting: The Clopidogrel Medco Outcomes Study"
- Bhatt D. *The Clopidogrel and the Optimization of Gastrointestinal Events [COGENT]. Presented at Transcatheter Cardiovascular Therapeutics 2009, September 23, 2009, San Francisco, CA. [Abstract].*

## CONGRATULATIONS

### Antoinet Moore, PharmD

successfully passed the examination to become a Board Certified Geriatric Pharmacist (BCGP).

### Robin Townsend, RPh

obtained her Doctorate of Pharmacy Degree (PharmD).

-submitted by

Alison James, PharmD

VA CBOC- Perry

**We welcome your thoughts, comments and/or suggestions.**

Do you have an idea for an article? Is there information we can provide to help you?

All correspondence concerning

"The Pharmacy Corner" should be sent to:

Sharail Smith via EMAIL: [Sharail.Smith@va.gov](mailto:Sharail.Smith@va.gov)